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This listing of claims will replace all prior versions,  
and listings, of claims in the application:

1 Claim 1 (original): In a network having a plurality of  
2 nodes arranged in at least two zones, a method for a  
3 particular node to determine a current partial topological  
4 state of the network, the method comprising:

- 5 a) determining a zone of the network in which the  
6 particular node resides;
- 7 b) for each node in the zone, determining nodes  
8 having a physical communication link with the node in  
9 the zone; and
- 10 c) for each zone in the network, determining zones  
11 having a virtual connection with the zone in the  
12 network.

1 Claim 2 (previously presented): The method of claim 1  
2 wherein the act of determining nodes having a physical  
3 communication link with the node in the zone includes:

- 4 i) broadcasting a link request from the node;
- 5 ii) if a response to the link request is  
6 received by the node,
  - 7 A) if the response was from a node within  
8 the same zone as the node, storing an  
9 identifier of the responding node, and
  - 10 B) if the response was from a node that is  
11 not within the same zone as the node,  
12 storing an identifier of the zone to which  
13 the responding node belongs; and
- 14 iii) broadcasting, from the particular node, a  
15 link state message including the identifier of  
16 the responding node if the response was from a

17 node within the same zone and the identifier of  
18 the zone to which the responding node belongs if  
19 the response was from a node not within the same  
20 zone as the node.

1 Claim 3 (original): The method of claim 2, wherein the act  
2 of determining nodes having a physical communication link  
3 with the node in the zone further includes:

4 iv) if a link state message is received, by the  
5 node, from another node, then storing the link  
6 state message if the other node is within the  
7 same zone as the particular node.

1 Claim 4 (original): The method of claim 1, wherein the  
2 act, for each zone in the network, of determining zones  
3 having a virtual connection with the zone in the network  
4 includes:

5 i) determining whether another zone has a node  
6 with a physical communications link with a node  
7 in the zone, and  
8 ii) if it is determined that the other zone has  
9 a node with a physical communications link with  
10 the zone in the zone, then storing a data  
11 structure including an identification of the  
12 other zone.

1 Claim 5 (previously presented): The method of claim 4,  
2 wherein the act, for each zone in the network, of  
3 determining zones having a virtual connection with the zone  
4 in the network further includes:

5           iii) sending the stored data structure,  
6           including the identification of the other zone,  
7           throughout the network.

1 Claim 6 (previously presented): The method of claim 5  
2 wherein the stored data structure, including the  
3 identification of the other zone, is only broadcast by  
4 gateway nodes.

1 Claim 7 (original): In a network having a plurality of  
2 nodes arranged in at least two zones, a method for a  
3 particular node to determine a current partial topological  
4 state of the network, the method comprising:  
5       a) for each node in a zone in which the particular  
6       node resides, determining nodes having a physical  
7       communication link with the node in the zone; and  
8       b) for each zone in the network, determining zones  
9       having a virtual connection with the zone in the  
10       network.

1 Claim 8 (previously presented): The method of claim 7  
2 wherein the act of determining nodes having a physical  
3 communication link with the node in the zone includes:  
4       i) broadcasting a link request from the node;  
5       ii) if a response to the link request is  
6       received by the node,  
7           A) if the response was from a node within  
8           the same zone as the node, storing an  
9           identifier of the responding node, and  
10          B) if the response was from a node that is  
11          not within the same zone as the node,

12                   storing an identifier of the zone to which  
13                   the responding node belongs; and  
14           iii)   broadcasting, from the particular node, a  
15           link state message including the identifier of  
16           the responding node if the response was from a  
17           node within the same zone as the node and the  
18           identifier of the zone to which the responding  
19           node belongs if the response was from a node that  
20           is not within the same zone as the node.

1   Claim 9 (original):   The method of claim 7, wherein the  
2   act, for each zone in the network, of determining zones  
3   having a virtual connection with the zone in the network  
4   includes:

5           i)   determining whether another zone has a node  
6           with a physical communications link with a node  
7           in the zone, and  
8           ii)   if it is determined that the other zone has  
9           a node with a physical communications link with  
10          the zone in the zone, then storing a data  
11          structure including an identification of the  
12          other zone.

1   Claim 10 (original):   In a network having a plurality of  
2   nodes arranged in at least two zones, a method for  
3   transmitting data from a first node in the network to a  
4   second node in the network, the method comprising:

5          a)   determining whether or not the second node is in  
6          the same zone as the first node;  
7          b1)   if it is determined that the second node is in  
8          the same zone as the first node, then routing the data

9           towards the second node based on an intra-zone routing  
10          table; and  
11          b2) if it is determined that the second node is not  
12          in the same zone as the first node, then  
13              i) transmitting a location request,  
14              ii) if a response to the location request is  
15              received, then ensuring that the data is provided  
16              with a zone identifier and node identifier for  
17              the second node, and  
18              iii) routing the data based on an inter-zone  
19              routing table.

1   Claim 11 (canceled)

1   Claim 12 (currently amended): In a network having a  
2   plurality of nodes arranged in at least two zones, a method  
3   for a particular node to respond to a request for the  
4   location of a destination node, the method comprising:  
5       a) determining whether or not the destination node is  
6       in the zone of the particular node; and  
7       b) if the zone of the destination node is in the zone  
8       of the particular node, transmitting a reply message  
9       which includes an identifier of the zone of the  
10      particular node;  
11   [The method of claim 11] wherein the step of determining  
12   whether or not the destination node is in the zone of a  
13   particular node is done based on the contents of a  
14   intra-zone routing table of the particular node.

1   Claim 13 (original): In a network having a plurality of  
2   nodes arranged in at least two zones, a method for a

3 particular node to forward data towards a destination node  
4 in a destination zone, the method comprising:  
5 a) determining whether or not the destination zone of  
6 the data is the same as the zone of the particular  
7 node;  
8 b1) if it is determined that the destination zone of  
9 the data is not the same as the zone of the particular  
10 node, then advancing the data towards the destination  
11 zone based on an inter-zone routing table; and  
12 b2) if it is determined that the destination zone of  
13 the data is the same as the zone of the particular  
14 node, but that the particular node is not the  
15 destination node, then advancing the data towards the  
16 destination node based on an intra-zone routing table.

1 Claim 14 (original): The method of claim 13 further  
2 comprising:

3 b3) if it is determined that the destination zone of  
4 the data is the same as the zone of the particular  
5 node, and that the particular node is the destination  
6 node, then reading the data.

1 Claim 15 (original): A network having a plurality of nodes  
2 arranged in at least two zones, each node comprising:

3 a) a storage device, the storage device storing  
4 i) a value identifying one of the at least two  
5 zones in which the current node resides,  
6 ii) a list of nodes with which the current node  
7 has a physical communications link, and  
8 iii) a list of zones with which the one of the  
9 at least two zones has a virtual connection; and

10           b) a processor which can access information stored on  
11           the storage device.

1   Claim 16 (original): The network of claim 15, wherein the  
2   storage device further stores

3           iv) an intra-zone routing table, and  
4           v) an inter-zone routing table.

1   Claim 17 (original): The network of claim 15, wherein the  
2   storage device further stores

3           iv) a list of zones which include a node with  
4           which the current node has a physical  
5           communications link.

1   Claim 18 (original): In a network having a plurality of  
2   nodes arranged in at least two zones, a node comprising:

3       a) a storage device, the storage device storing  
4           i) a value identifying one of the at least two  
5           zones in which the current node resides,  
6           ii) a list of nodes with which the current node  
7           has a physical communications link, and  
8           iii) a list of zones with which the one of the  
9           at least two zones has a virtual connection; and  
10       b) a processor which can access information stored on  
11       the storage device.

1   Claim 19 (original): The node of claim 18, wherein the  
2   storage device further stores

3           iv) an intra-zone routing table, and  
4           v) an inter-zone routing table.

1   Claim 20 (original): The node of claim 18, wherein the



2 storage device further stores  
3           iv) a list of zones which include a node with  
4           which the current node has a physical  
5           communications link.

1     Claim 21 (original): In a network having a plurality of  
2     nodes arranged in at least two zones, a method for a  
3     particular node to generate intra-zone and inter-zone  
4     routing tables based on a partial topological current  
5     state of the network, the method comprising:  
6         a) determining a zone of the network in which the  
7         particular node resides;  
8         b) for each node in the zone, determining nodes  
9         having a physical communication link with the node  
10        in the zone;  
11        c) determining an intra-zone routing table from the  
12        nodes determined to have a physical communication  
13        link with the node in the zone;  
14        d) for each zone in the network, determining zones  
15        having a virtual connection with the zone in the  
16        network; and  
17        e) determining an inter-zone routing table from the  
18        zones determined to have a virtual connection with  
19        the zone in the network.

1     Claim 22 (original): In a network having a plurality of  
2     nodes arranged in at least two zones, a method for a  
3     particular node to generate intra-zone and inter-zone  
4     routing tables based on a partial topological current state  
5     of the network, the method comprising:  
6         a) for each node in the zone, determining nodes  
7         having a physical communication link with the node in

8       a zone in which the particular node resides;  
9       b) determining an intra-zone routing table from the  
10      nodes determined to have a physical communication link  
11      with the node in the zone;  
12      c) for each zone in the network, determining zones  
13      having a virtual connection with the zone in the  
14      network; and  
15      d) determining an inter-zone routing table from the  
16      zones determined to have a virtual connection with the  
17      zone in the network.